WILL A MAN MADE SUPERMAN BECOME A POSSIBILITY?

STIMULATED TO



Science Is Feeling Its Way to a Clearer Knowledge of How Growth Is Controlled

possibility of this achievement.

To quote from Dr. Robertson's pa-tion is that of Dr. T. Braileford Rob-per in the Journal of Biological Cheming a period of four years of exact ex-periments. He has succeeded in isolat-It should be borne in mind, however,

goes, the front and the middle portion they were much heavier. alone give off chemical secretions or

lated exaggerated physical growth. ting particularly noticeable where the LIST the pitultary body was subnormal, this seemed only logical to hold the pituitary body responsible for the under-

not only "brother to the ox" but bears kinship to many other species they were sending out the alarm. of animal life. Each of these species a pewildering multiplicity of chem-

y more potent instruments for the help and the betterment of humankind. Dr. Robertson isolated tethelin by the matter second thought.

and he brought to light the important

inowledge By which experimen may be produced at will? The coordination of the labors of many while during subsequent normal laboratory investigators suggests the growth periods the influence of the

ing a principle of the anterior lobe of that resemblance does not mean identical results. For instance, the mice

ber of ductiess bodies within the hu- elin, but the curves quite fail to dis- be used to advantage it is essential and man frame. It is located in the head close the really astonishing details of that there should be no conflict of the result in the case of the males just back of the point where the optic this dissimilarity. For instance, at effects, but that only that principle will answer for the present purchase the end of sixty weeks of treatment should be employed which will serve After freeding began all of the annuals herve crosses or branches on its way the tethelin fed mice were sturdier and the desired end. to the eye sockets, and commonly is stockier than their normal fellows shaped like a small peanut and weighs each half a gram. It consists of three experimenters express it, "controls," tance. The layman naturally wonders controls had regained to per cent parts, the anterior, the middle and the animals were found to be smaller than would maintain the outward forms of "treated" had recovered 68 per cent posterior, and, so far as knowledge their normal kind, but size for size youth so markedly evident in the case At end of twelve hours the "controls"

In all cases of exaggerated stature, their lines were those of youthfulness, six foot type which most people would when the test ended at the conclusion of use the enlarged pituitary stimu- coats of the normal males are apt mormone upon the replacement of tis-

science feeling its way toward | feets being checked or accelerated ac- | The very latest work in this direc-

ertsen of the University of California. istry: "The effects of tethelin upon the growth of white mice resemble in chemistry in the Rudolph Spreckels every particular the effects of the administration of the whole anterior lobe. physiological laboratory of that insti- These effects consist in marked retation, and very lately he has pub-lighed an account of researches cover-

that resemblance does not mean identical product, which exercises a striking control over physical growth, and he has established hie theory by using some scores of white mice for his tests.

It has been known for years that the pituitary body urquestionably influenced bodily growth, but the medial profession also realized that this curious gland in the head had other functions, and some of them were seemingly contradictory or antagonistic. Dr. Robertson's achievement les in distinguishing and in separation for the mice seemingly contradictory or antagonistic for the pituitary gland is one of a number of ductless bodies within the head man of the mice fed with tee the first of the following proving from that of the mice fed with the whole of the anterior lobe to be shaggy, "storing," and even dis-source through waste incident to to be shaggy, "storing," and even dis-sources of the snowy whiteness of youth to be shaggy, "storing," and even dis-sources of the snowy whiteness of youth to be shaggy, "storing," and even dis-source through waste incident to to be shaggy, "storing," and even dis-source through waste incident to to be shaggy, "storing," and even dis-source that the sam amintained in the fur of the sam amintained in the fur of

they were much heavier.

of the white mice. Again, may not the superman, physically, be of avertures had more rounded bodies and age height rather than of the imposing were 112 per cent, to the good, and

ROG-FORM BY P-PITUITARY BODY PN-PINEAL . HERCULES .

ference was that the pituitary giand the glossy, silky appearance of the by tethelin in bodily development. Dr. fast and the "treated" mice were still groups, one to act as "controls" and the primal cause and next has made it us his work at Naples he reports: "In pily not so numerous here as they are coats of young animals or of females." Robertson went a step further and ahead with a net recovery of 72 per the other for the test. They were all possible to identify the normal function and to isolate the controlling of the sought to determine the effects of this cent.

CURVES OF COMPARATIVE GROWTH OF THE NORMAL (A) and THE TETHELINFED (B) MALE MICE.

dermically to mice produces a remark- the threat.

geomety used in promoting convales to the subjects in senting to some strainer. The thymns food caused renew where fever or inantition has in the first and work was carried on at the some of the normal and at the same that this same principle extracted his work was carried on at the 200-time it retard or completely supportingly gland, may serve to provoke of it at the blooked discretory of strainer the overgrown holizofes the leading of wornds. Some of Dr. the time retard discretory of strainer the overgrown holizofes the belief that tethelin has in a the for the purpose of straining the influence of parently [II affected by the belief that tethelin has in a the for the purpose of straining the influence of parently [II affected by the belief that tethelin has in a the for the purpose of straining the influence of parently [II affected by the belief that tethelin has in a the for the purpose of straining the influence of parently [II affected by the belief that tethelin has in a the for the purpose of straining the influence of parently opposed to the minimum growths and even to bring about their the development of fish and amphibian from Maturity of form seemed to growths and even to bring about their the development of fish and amphibian frogs. Maturity of form seemed to complete subsidence. It is suggested edge (frogs). The substances used bring in its train physical wealth as or that tethelin may replace the knife were obtained from mammalian tis- a jessened power of resistance, and the in dealing with cancer, and especially such as thyroid, thymus, pitui- net result was something like the sap-

tethelin in the case of wounds dangerous to operate upon.

ings work wonders.

Or. Reservesin was dealing with His investigations in Duly are The Reservicin was dealing with brightly mice, and the charges brought further suggestive or rottion confirmation at worse list such modifications as might to advantage be incited in many human beings—checking growth at one time and stimulating it at another. Have a beings lost like mice, that their own growth cycles, and these periods bring in their train certain development in their train certain development in blems. The subject is a fascinating one and its angles are numerous. But this is only one phase of growth control, and a New mented with by In. chalematical, his investigations been placed in bodily decided with the properties of extracts from the description of the creams used apparently made in difference in their notion.

Courtes, of American Journal of Acatomy

GROUP 1 and TADPOLES 2 and 3 WERE
FIRST DENIED FOOD and THEN GROUP 1
WAS FED ON THYROID. THE THREE LARGE TADPOLES MARKED
2 and 3 WERE GIVEN THYMUS GLAND, 4.5.6.7. WERE FED

But Instead of a Hercules the Superman May Be a Creature That Defies Old Age

agent in the bands of the doctor that ment council by the various substances

FOR VARYING PERIODS ENTIRELY UPON THYMUS.

part that may be placed in bodily de- culiar properties of extracts from the thereon glands, and again it was shown that these small bodies exert a potent influence ever the developing creature, centrolling growth in a somewhat different fash-

> time on acctionable results were obtained by layroid feeding. They were the same in all experiments. The in-turence of the thyroid food was such that it stopped any further growth, but on the contrary led to an abnormal diminution of the size in the animals treated, while simultaneously hody burners by and brought it to the

That is to say, while growth was in. The essence of the test, is this science in by two ther glandmar exsummarized by it. Robertson: "Teths truets these from the thyroid and the form white effectually checking incha * * * when administ red hypes the most grands, which are located in
dermically to more produces a remarks the therat.

pair and the healing was hastened to partment of auntomy, Council Universal According to Dr. Gudernatsch; The a pronounced degree,"

An order to Dr. Gudernatsch; The appronounced degree, which was a continuous decided to the description of t pronounced degree."

It is suggested that tethella therefore distology and enthypology. In some velopized of the tadpoles was as event suitable stages may be advantage of the experimental work he teed that deal as that of the thyroid, but less it suitable stages may be advantage poles for subjects in seeking to gain striking. The thyrons food causeth

when the disease is deep scaled and tary, adrenal pancrease, &c. Different ping of old age, dangerous to operate upon.

Here is another instance in the another instance in th that is, giantism, the pituitary body has giantism, the pituitary body and what was still more astonishing be apt to expect?

of the third day the "controls" showed twenty mice while inder ether has been found when examined to be absorbed by a small plant of the coats of the males of this group.

Following these experiments in a weight recovery of 59 per cent, of little disks of skin removed by a small nale of medicine in which abnormality sea water containing the recently ferded into two has brought to light first the seat of tilized eggs. As Dr. Gudernatsch sums persons of low mentality who are hards. To determine the therapeutic value crived bypodermic injections of tether ment, thus quitting a therapeutic disturbances of the normal develop- is that the mented world now has its deposit there giandwise extract.

LONG ONE may in time be employed to over some intermediate players abnormality.

most beautiful problems. This time data that the water rushed through the rest that the water rushed through the street managements in the rest in the problems and in the carrism to the feelphone sechange at the problems and the street means of common the entire pitultary gland were rested upon human beings, and in the carrism tested tested upon human beings, and in the carrism test that the water rushed through the feeling also desired when he haves the median that the water rushed through the feeling was the telephone bells in the variance of the possible of the stand of the algorate of the carrism tested upon the feeling as when the telephone bells in the variance of the possible of the feel that the water rushed through the feeling and the feeling and the feeling as the feel of the feel that the water rushed through the feeling and the feeling as the feel of t

with Dr. Keyes and told him that the Violet Shultz were ready gests, the abnormal creatures become rall had come from the home of Mrs. Fire destroyed the plant of the fixed in their physical bounties and Carol Khouri, 563 East Twenty-sixth Northern Illinois Cereal Company, 160 reproduced their kind generation and

the circumstances. She had to think quick and act quicker. There was no alternative; she acted without giving list in darkness, as the electric plant has alternative; she acted without giving list in darkness, as the electric plant has a list of the blaze, which was shots were poured into the blaze.

OF HEROINES special immature. Here, again if to her switchboard in the highest Conn., they are still become only logical to hold the pitui-

Dr. Robertson's researches indicate of what seemed certain death was esfundamentally all animal life is pecially conspicuous, there are many related because in his experiments on other cases on record in which telemice he used an extract made from the phone girls have stuck to their posts pituliary bedies of oxen. The same in spite of danger. They have done so source has supplied pituitary prepara- while fire was licking at the very doors he for human subjects. Clearly in of the rooms in which they were workthe realm of blochemistry, then, man ing; while floods have threatened the

is merely a different form or model of brings to mind the case of another Miss Barnell's own version of the mara's act was doubtless the result of wire she said: dowly discovering these processes, and i an impulsive idea of her duty under giandular physiology are becoming

by process of experimental elimination, using first the entire pituitary gland, using first the first the first the danger that threatened came slow-like departments in particular first the first department on the first de Time and time again he was able to her board and spread the alarm was

reproduce certain effects or results, the means of warning hundreds of per-

sent on appeal to the world at large to send relief in the form of food to the starving and pent up tehabitants of Zanesville. Because of the fact that the rushing waters had levelled all telegraph wires leading out of the city t was impossible to get to New York the true conditions that existed in the destruction of the building from which facts over the one remaining telephone Ohio city until Miss Barnell sent the

"From the front windows we can see the town itself. been swept away and our only light to

safety if she preferred to do so; but she didn't. Her decision to remain at she didn't. Her decision to remain at her board and spread the alarm was the means of warning hundreds of persons, who were thus enabled to get outside the danger zone in time.

This was the case of Miss Arline

York. All the way up Main street to their posts because of the impending danger. This they absolutely refused danger. This they absolutely refused danger. This they absolutely refused form the water is very, very danger. This they absolutely refused form the water is very, very danger. This they absolutely refused form the water is very, very danger. This they absolutely refused form the water is very, very danger. This they absolutely refused form the water is very, very danger. This they absolutely refused form the water is very, very danger. This they absolutely refused form the water is very, very danger. This they absolutely refused form the water is very, very danger. This they absolutely refused form the water is very, very danger. This they absolutely refused form the water is very, very danger. This they absolutely refused form the water is very, very danger. This they absolutely refused form the water is very, very danger. This they absolutely refused form the water is very, very danger. This they absolutely refused form the water is very, very danger. This they absolutely refused form the water is very, very danger. This they absolutely refused form the water is very, very danger. This they absolutely refused form the water is very, very danger. This they absolutely refused form the water is very, very danger. This they absolutely refused form the water is very, very danger. This they absolutely refused form the down manufacture of the wince case of the whole deep. It is at least forty feet above to do until they were assured that their which they were desired for the wince case of the wince the water is very with the post of the wince case of the

face of explosion and flood have been

famed by a high wind. Without undue deliberation the girls summoned
broken by the fusikade.

The entry bombarded Rann on a
dren, and, what is empally succeeding the plant of the pineal extract has been extractly.

After the third attempt to blow the

assistance from the fire departments in

After the third attempt to blow the But in the case of the other girl from the one gas main that hasn't due deliberation the girls summoned broken by the fusillade.

1- PINEAL GLAND 2- PITUITARY BODY.

GLANDS -

3 and 4-THYROID and PARATHYROID

5-THYMUS - 6-PANCREAS

7- SPLEEN- 8-8-ADRENAL

McNamara and Miss Barnell in the the number of Town Marshal Helder and notified him of what was happenthe telephone girls in the exchange in The town began to wake up. Miss Suffern, N. Y., was considered. Those present in the meantime had got the girls had to face the peril of fire when Wichtta police on the wire and eight

find House, and for a time threatened off the citizens, who had been aroused the down itself.

Sometimes the distribution of the citizens, who had been aroused the distribution of the citizens, who had been aroused the distribution of the citizens. With the entire into the telephone receiver, they found the citizens are citizens.

HEN Tessie McNamara stuck to her switchboard in the big monthions plant of the Canmunitions plant of the Canmu

were audible.

Knocked on the door of the exchange.

Miss Gilden got into communication and Man Little! Spangler and Miss by the abnormal creatures become

street. Brooklyn. Miss Gilden also feet from the telephone office, and generation, while the immurred too another Police Headquarters and No. While the flames crackled the girls tion of the lamen take progressed too they committed themselves to the task of remaining at work summoning asalciance from neighboring twos. The peril was so imminent that the heat cracked the windows beside which they The bravery of Miss McNamara
brings to mind the case of another
tefephone girl who was placed in a
somewhat similar position to that
of some the position of the position in notifying
to the house.

The first stated early in the morning
to the position of the
beautiful to the position o